

IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A cold plate for cooling an electronic component, comprising:
 - a first member defining a first set of semi-circular channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;
 - a second member defining a second set of semi-circular channel walls, the second member being coupled to the first member such that the second set of channels walls are interlaced with the first set of channel walls;
 - a fluid inlet provided on one of the first and second members; and
 - a fluid outlet provided on one of the first and second members, wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths having different predominant flow directions between the fluid inlet and the fluid outlet.

2. (previously amended) The cold plate of claim 1, wherein channel gaps are provided between each of the interlaced channel walls and a second channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

3. (previously amended) The cold plate of claim 1, wherein the channel structure defined by the first and second sets of channel walls provides two substantially symmetrical fluid flow paths between the fluid inlet and the fluid outlet.

4. (currently amended) A cold plate for cooling an electronic component, comprising:

a first member defining a first set of semi-circular channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;

a second member defining a second set of semi-circular channel walls, the second member being coupled to the first member such that the second set of channels walls are interlaced with the first set of channel walls;

a fluid inlet provided on one of the first and second members; and

a fluid outlet provided on one of the first and second members,

wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths having different flow directions between the fluid inlet and the fluid outlet;

The cold plate of claim 1, wherein the channel structure defined by the first and second sets of channel walls provides four non-linear flow paths having different flow directions between the fluid inlet and the fluid outlet.

5. (previously amended) The cold plate of claim 1, wherein the fluid inlet is located at a center of the cold plate.

6. (previously amended) The cold plate of claim 1, wherein a surface of a wall of the first set of channel walls is tapered at an angle of greater than about five degrees.

7-9. (canceled).

10. (currently amended) A method, comprising:
forming a first member defining a first set of semi-circular channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;
forming a second member defining a second set of semi-circular channel walls;
coupling the second member to the first member such that the second set of channels walls are interlaced with the first set of channel walls;
providing a fluid inlet on one of the first and second members;

providing a fluid outlet on one of the first and second members; and
providing at least two fluid flow paths having different predominant
flow directions between the fluid inlet and the fluid outlet.

11. (previously amended) The method of claim 10, wherein channel gaps are provided between each of the interlaced channel walls and a second channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

12. (previously amended) The method of claim 10, further comprising:
providing two substantially symmetrical fluid flow paths between the fluid inlet and the fluid outlet.

13. (previously amended) A method, comprising:
forming a first member defining a first set of semi-circular channel
walls, the first set of channel walls having a first channel gap between two
respective facing walls of the first set of channel walls;
forming a second member defining a second set of semi-circular
channel walls;
coupling the second member to the first member such that the
second set of channels walls are interlaced with the first set of channel walls;
providing a fluid inlet on one of the first and second members;

providing a fluid outlet on one of the first and second members;
providing at least two fluid flow paths having different flow
directions between the fluid inlet and the fluid outlet; and

~~The method of claim 10, further comprising:~~

providing four non-linear flow paths having different flow directions
between the fluid inlet and the fluid outlet.

14. (previously amended) The method of claim 10, further comprising:
providing the fluid inlet at a center of one of the first and second
members.

15. (original) The method of claim 10, further comprising:
tapering a surface of a wall of the first set of channel walls at an
angle of greater than about five degrees.

16-18. (canceled).

19. (currently amended) A system, comprising:

an electronic component; and

a cold plate thermally coupled to the electronic component, the cold plate comprising:

a first member defining a first set of semi-circular channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;

a second member defining a second set of semi-circular channel walls, the second member being coupled to the first member such that the second set of channels walls are interlaced with the first set of channel walls;

a fluid inlet provided on one of the first and second members; and

a fluid outlet provided on one of the first and second members,

wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths having different predominant flow directions between the fluid inlet and the fluid outlet.

20. (previously amended) The system of claim 19, wherein channel gaps are provided between each of the interlaced channel walls and a second

channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

21. (previously amended) The system of claim 19, wherein a channel structure defined by the first and second sets of channel walls provides two substantially symmetrical fluid flow paths between the fluid inlet and the fluid outlet.

22. (currently amended) A system, comprising:
an electronic component; and
a cold plate thermally coupled to the electronic component, the cold
plate comprising:
a first member defining a first set of semi-circular channel
walls, the first set of channel walls having a first channel gap between two
respective facing walls of the first set of channel walls;
a second member defining a second set of semi-circular
channel walls, the second member being coupled to the first member such that
the second set of channels walls are interlaced with the first set of channel walls;
a fluid inlet provided on one of the first and second
members; and
a fluid outlet provided on one of the first and second
members.

wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths having different flow directions between the fluid inlet and the fluid outlet, and

The system of claim 19, wherein a channel structure defined by the first and second sets of channel wall provides four non-linear flow paths having different flow directions between the fluid inlet and the fluid outlet.

23. (previously amended) The system of claim 19, wherein the fluid inlet is located at a center of the cold plate.

24. (original) The apparatus of claim 19, wherein a surface of a wall of the first set of channel walls is tapered at an angle of greater than about five degrees.

25. (original) The system of claim 19, further comprising:
a heat dissipation device coupled to the cold plate by a loop of tubing;
cooling fluid disposed in the tubing; and
a pump adapted to circulate the cooling fluid.

26. (original) The system of claim 25, further comprising:

a fan adapted to provide cooling air to at least one of the heat dissipation device and the cold plate.

27-31. (canceled).